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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,234	10/14/2003	Bin Zhu	MS1-1753US	4625
22801 7590 01/22/2008 LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER HENEGHAN, MATTHEW E	
			ART UNIT 2134	PAPER NUMBER
			MAIL DATE 01/22/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/685,234

Applicant(s)

ZHU ET AL.

Examiner

Matthew Heneghan

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2007 and 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-9,11,22-24,28,31,32,43,46 and 47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-9,11,22-24,28,43,46 and 47 is/are rejected.
- 7) ☒ Claim(s) 31 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/16/07, 10/8/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In response to the previous office action, claims 1, 6, 22, 31, and 42 and cancelled claims 3-5, 10, 12-21, 25-27, 29, 30, 33-42, 44, 45, and 48. Claims 1, 2, 6-9, 11, 22-24, 28, 31, 32, 43, 46, and 47 have been examined.

2. Applicant's request for an interview has been noted; however, such an interview at this juncture is not a matter of right and it does not appear that the outstanding new matter issues could have been resolved in this manner at this time. No interview call was therefore made.

Response to Amendment

3. The affidavit under 37 CFR 1.132 filed 6 November 2007 is insufficient to overcome the rejection of former claim 5 et al. (now claim 1 et al.) based upon 35 U.S.C. 112, first paragraph, as set forth in the last Office action because Min Feng's explanations do not adequately establish that the changes to the specification filed 25 November 2003 are substantially equivalent to that which was disclosed in the original specification.

Regarding Change A, Min Feng's explanations are based in part on the assertion that N is a compound number; however, this property is not disclosed in the specification. Even if this were the case, Min Feng's fails to establish that one skilled in

the art would necessarily replace N with $\Phi(N)$. It has not been established by these arguments that Change A does not constitute new matter.

Regarding the first change in Change B, since Min Feng appears to admit that $g\mathbb{C}Z_n$ and $g\mathbb{C}Z_n^*$ are acceptable alternatives to one another, the change to $g\mathbb{C}Z_n^*$ must be construed as new matter.

Regarding the second change in Change B and Changes C and D, the argument concerning the addition of mod N to equations (4), (7), and (8) is persuasive.

Regarding Change (E), Min Feng admits that the change is not appropriate for the situation and the argument is therefore not persuasive.

Information Disclosure Statement

4. The following Information Disclosure Statements in the instant application have been fully considered, except as otherwise noted:

IDS filed 16 May 2007.

IDS filed 8 October 2007.

Specification

5. The amendment filed 25 November 2003 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added

material which is not supported by the original disclosure is as follows: The amendment to the specification includes several changes to previously presented equations.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 2, 6-9, 11, 22-24, 28, 43, 46, and 47 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 22, and 43 each incorporate new matter into the equations that were introduced in the amendment filed 25 November 2003 and which have not been overcome by Applicant's arguments and affidavit.

Claims 2, 6-9, 11, 23, 24, 28, 46, and 47 depend from rejected claims 1, 22, 31, and 43 and include all the limitations of those claims, thereby rendering those dependent claims as failing to comply with the written description requirement.

Allowable Subject Matter

7. Claims 31 and 32 allowed for the reasons regarding claim 33 in the previous office action.
8. Claims 1, 2, 6-9, 11, 22-24, 28, 43, 46, and 47 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, 1st paragraph, set forth in this Office action for the reasons stated regarding claims 5, 6, 27, and 48 in the previous office action.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (571) 272-3834. The examiner can normally be reached on Monday-Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand, can be reached at (571) 272-3811.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-3800

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Matthew Heneghan/

Primary Patent Examiner, USPTO AU 2134

January 16, 2008